

## CLAIMS

What is claimed is:

1           1.       An information handling system having a multi-host virtual bridge input-output  
2 switch, said system comprising:

3                   a plurality of server modules, each of said plurality of server modules having at  
4           least one central processing unit (CPU), memory and at least one server input-output  
5           (I/O) port;

6                   a plurality of input-output (I/O) modules, each of said plurality of input-output  
7           modules having a module I/O port; and

8                   at least one input-output (I/O) switch, said at least one I/O switch coupled to each  
9           of the at least one server I/O ports and to each of the module I/O ports, wherein said at  
10          least one I/O switch couples selected ones of the at least one server I/O ports to selected  
11          ones of the module I/O ports.

1           2.       The information handling system according to claim 1, further comprising a  
2 bridge for coupling the CPU to the memory and to the at least one server I/O port.

1           3.       The information handling system according to claim 1, further comprising at least  
2 one native input-output (I/O) device in at least one of said plurality of server modules.

1           4.       The information handling system according to claim 3, wherein the at least one  
2 native I/O device is selected from the group consisting of USB, serial, keyboard, video and  
3 mouse.

1           5.       The information handling system according to claim 1, further comprising an  
2 Ethernet controller in at least one of said plurality of server modules.

1           6.       The information handling system according to claim 1, wherein the at least one  
2 server I/O port is a serial port.

1           7.       The information handling system according to claim 1, wherein the module I/O  
2 port is a serial port.

1           8.       The information handling system according to claim 1, wherein the at least one  
2 server I/O port is a serial PCI I/O port.

1           9.       The information handling system according to claim 1, wherein the module I/O  
2 port is a serial PCI I/O port.

1           10.      The information handling system according to claim 1, where said at least one I/O  
2 switch comprises:

3                   a plurality of input buffers;

4                   a plurality of output buffers;

5                   a plurality of multiplexers, wherein said plurality of input buffers and said  
6 plurality of output buffers are coupled to said plurality of multiplexers; and

7                   control logic for controlling said plurality of multiplexers, wherein said plurality  
8 of multiplexers determine which ones of said plurality of input buffers are coupled to  
9 which ones of said plurality of output buffers.

1           11.    The information handling system according to claim 10, wherein a one of said  
2 input buffers and a one of said output buffers are coupled to each server I/O port and each  
3 module I/O port.

1           12.    The information handling system according to claim 10, further comprising a  
2 mapping table coupled to said control logic, said mapping table storing which ones of said  
3 plurality of input buffers are coupled to which ones of said plurality of output buffers.

1           13.    The information handling system according to claim 12, further comprising  
2 initialization logic for initializing said control logic and said mapping table.

1           14.    The information handling system according to claim 13, wherein said  
2 initialization logic is external from said at least one I/O switch.

1           15.    The information handling system according to claim 14, wherein said  
2 initialization logic is coupled to said control logic with a low pin count interface.

1           16.    The information handling system according to claim 15, wherein the low pin  
2 count interface is selected from the group consisting of I<sup>2</sup>C and JTAG.

1           17.    The information handling system according to claim 1, wherein said at least one  
2 I/O switch is accessed through a user interface.

1           18.    An input-output (I/O) switch for an information handling system, comprising:  
2                   a plurality of server I/O ports, each of said plurality of server I/O ports having an  
3 input buffer and an output buffer;

4                   a plurality of module I/O ports, each of said plurality of module I/O ports having  
5                   an input buffer and an output buffer;

6                   a plurality of multiplexers, wherein the input buffers and the output buffers are  
7                   coupled to said plurality of multiplexers; and

8                   control logic for controlling said plurality of multiplexers, wherein said plurality  
9                   of multiplexers determine which of the input buffers are coupled to which of the output  
10                  buffers.

1                  19.    The I/O switch according to claim 18, further comprising a mapping table coupled  
2                  to said control logic, said mapping table storing which of the input buffers are coupled to which  
3                  of the output buffers.

1                  20.    The I/O switch according to claim 18, wherein the server I/O port is a serial I/O  
2                  port.

1                  21.    The I/O switch according to claim 18, wherein the server I/O port is a serial PCI  
2                  I/O port.

1                  22.    The I/O switch according to claim 18, wherein the module I/O port is a serial I/O  
2                  port.

1                  23.    The I/O switch according to claim 18, wherein the module I/O port is a serial PCI  
2                  I/O port.

1           24.     A method for coupling a plurality of server modules to a plurality of input-output  
2 (I/O) modules in an information handling system, said method comprising the steps of:

3                   providing a plurality of server modules, each of the plurality of server modules  
4                   having at least one central processing unit (CPU), memory and at least one server input-  
5                   output (I/O) port;

6                   providing a plurality of input-output (I/O) modules, each of the plurality of input-  
7                   output modules having a module I/O port; and

8                   coupling the at least one server I/O ports to respective ones of the module I/O  
9                   ports.

1           25.     The method according to claim 24, further comprising the step of mapping which  
2 of the at least one server I/O ports are coupled to which of the module I/O ports.

1           26.     The method according to claim 24, further comprising the step of initializing  
2 which of the at least one server I/O ports are coupled to which of the module I/O ports.

1           27.     The method according to claim 26, wherein the step of initializing is performed  
2 though a user interface.